

IN THE CLAIMS

Please amend the claims as follows:

1. (Currently amended) An article comprising:
a wire-bonding substrate including a first surface and a second surface,
wherein the substrate includes at least one of:
a bond finger disposed on the first surface, wherein the bond finger
includes a metallization in the substrate, and a metallic surface finish above
and on the metallization; and
a land pad for a ball attach on the second surface, wherein the land
pad includes a metallization in the substrate, and a metallic surface finish
below and on the metallization; and
wherein the metallic surface finish has a higher electrochemical
potential than the metallization in the substrate.
2. (Original) The article according to claim 1, wherein the metallization is a
copper metallization, and wherein the metallic surface finish is selected from gold, gold
alloy, silver, silver alloy, platinum, platinum alloy, iridium, iridium alloy, and combinations
thereof.
3. (Original) The article according to claim 1, wherein the metallic surface
finish includes a first plating layer above and on the metallization, and a second plating
layer above and on the first plating layer.
4. (Original) The article according to claim 1, wherein the metallization is
copper, and wherein the metallic surface finish includes a gold first plating layer above and
on the metallization, and a gold second plating layer above and on the gold first plating
layer.

5. (Original) The article according to claim 1, wherein the metallization is copper, and wherein the metallic surface finish includes a first plating layer above and on the metallization and a second plating layer above and on the first plating layer, and wherein the metallic surface finish is in a thickness range from about 0.01 μm to about 10 μm .

6. (Original) The article according to claim 1, wherein the metallization is copper, and wherein the metallic surface finish includes:

a first plating layer above and on the metallization, wherein the first plating layer is selected from gold, gold alloy, silver, silver alloy, platinum, platinum alloy, iridium, iridium alloy, and combinations thereof; and

a second plating layer above and on the first plating layer, wherein the second plating layer includes an equal or higher electrochemical potential than the first plating layer, and wherein the metallic surface finish is in a thickness range from about 0.01 μm to about 10 μm .

7. (Original) The article according to claim 1, wherein the metallization is copper, and wherein the metallic surface finish includes:

a gold first plating layer above and on the metallization; and

a gold second plating layer above and on the first plating layer, and wherein the metallic surface finish is in a thickness range from about 0.01 μm to about 10 μm .

8. (Original) The article according to claim 1, wherein the metallization is copper, and wherein the metallic surface finish includes:

a first plating layer above and on the metallization, wherein the first plating layer is selected from gold, gold alloy, silver, silver alloy, platinum, platinum alloy, iridium, iridium alloy, and combinations thereof; and

a second plating layer above and on the first plating layer, wherein the second plating layer includes an equal or higher electrochemical potential than the first plating layer, and wherein the second plating layer is more ductile than the first plating layer.

Claims 9-27. (Canceled).

28. (New) An article comprising:

a wire-bonding substrate including a first surface and a second surface,
wherein the substrate includes at least one of:

a bond finger disposed on the first surface, wherein the bond finger includes a metallization in the substrate, and a metallic surface finish above and on the metallization; and

wherein the metallic surface finish has a higher electrochemical potential than the metallization in the substrate.

29. (New) The article of claim 28, wherein the metallization is a copper metallization, and wherein the metallic surface finish on the bond finger is selected from gold, gold alloy, silver, silver alloy, platinum, platinum alloy, iridium, iridium alloy, and combinations thereof.

30. (New) The article of claim 28, wherein the metallic surface finish on the bond finger includes a first plating layer above and on the metallization, and a second plating layer above and on the first plating layer.

31. (New) The article of claim 30, wherein the metallization is a copper metallization, and wherein the metallic surface finish on the bond finger is selected from

gold, gold alloy, silver, silver alloy, platinum, platinum alloy, iridium, iridium alloy, and combinations thereof.

32. (New) The article of claim 28, wherein the metallic surface finish on the bond finger includes a first plating layer above and on the metallization, and a second plating layer above and on the first plating layer, and wherein the metallic surface finish on the bond finger is in a thickness range from about 0.01 μm to about 10 μm .

33. (New) The article of claim 32, wherein the metallization is a copper metallization, and wherein the metallic surface finish on the bond finger is selected from gold, gold alloy, silver, silver alloy, platinum, platinum alloy, iridium, iridium alloy, and combinations thereof.

34. (New) The article of claim 28, wherein the metallic surface finish on the bond finger includes a first plating layer above and on the metallization in a thickness range from about 10Å to about 10,000 Å, and a second plating layer above and on the first plating layer, and wherein the metallic surface finish on the bond finger is in a thickness range from about 0.01 μm to about 10 μm .

35. (New) The article of claim 34, wherein the metallization is a copper metallization, and wherein the metallic surface finish on the bond finger is selected from gold, gold alloy, silver, silver alloy, platinum, platinum alloy, iridium, iridium alloy, and combinations thereof.

36. (New) The article of claim 28, further including a land pad for a ball attach on the second surface, wherein the land pad includes a metallization in the substrate, and a metallic surface finish below and on the metallization.

37. (New) The article of claim 36, wherein the metallization is a copper metallization, and wherein the metallic surface finish on the land pad is selected from gold, gold alloy, silver, silver alloy, platinum, platinum alloy, iridium, iridium alloy, and combinations thereof.

38. (New) The article of claim 36, wherein the metallic surface finish on the land pad includes a first plating layer above and on the land pad, and a second plating layer below and on the first plating layer.

39. (New) The article of claim 38, wherein the metallization is a copper metallization, and wherein the metallic surface finish on the land pad is selected from gold, gold alloy, silver, silver alloy, platinum, platinum alloy, iridium, iridium alloy, and combinations thereof.

40. (New) The article of claim 36, wherein the metallic surface finish on the land pad includes a first plating layer above and on the metallization, and a second plating layer above and on the first plating layer, and wherein the metallic surface finish on the bond finger is in a thickness range from about 0.01 μm to about 10 μm .

41. (New) The article of claim 40, wherein the metallization is a copper metallization, and wherein the metallic surface finish on the land pad is selected from gold, gold alloy, silver, silver alloy, platinum, platinum alloy, iridium, iridium alloy, and combinations thereof.

42. (New) The article of claim 36, wherein the metallic surface finish on the land pad includes a first plating layer above and on the metallization in a thickness range from about 10Å to about 10,000 Å, and a second plating layer above and on the first plating

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METHODS OF TESTING SAME

layer, and wherein the metallic surface finish on the bond finger is in a thickness range from about 0.01 μm to about 10 μm .

43. (New) The article of claim 42, wherein the metallization is a copper metallization, and wherein the metallic surface finish on the land pad is selected from gold, gold alloy, silver, silver alloy, platinum, platinum alloy, iridium, iridium alloy, and combinations thereof.

COMMENTS

Claim 1 was amended; claims 9-27 were cancelled; claims 28-43 were added; as a result, claims 1-8, and 28-43 are pending in this application.

No new matter was added by these amendments.

Applicant believes the application is in condition for examination and earnestly requests the prompt examination thereof.

The Examiner is invited to telephone Applicants' attorney, John Greaves at (801) 278-9171, or Applicants' below-named representative at (612) 349-9592 to facilitate the prosecution of this application. If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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